WHAT IS CLAIMED IS:

1. An isolated DNA sequence encoding a 30-kilodalton protein of *Ehrlichia canis*, wherein said protein is immunoreactive with anti-*Ehrlichia canis* serum.

2. The DNA sequence of claim 1, wherein said protein comprises of an amino acid sequence selected from the group consisting of SEQ ID No. 2, 4, 6, 40, 42, 44 and 46.

3. The DNA sequence of claim 2, wherein said protein has an N-terminal signal sequence.

4. The DNA sequence of claim 3, wherein said protein is post-translationally modified to a 28-kilodalton protein.

5. The DNA sequence of claim 1, wherein said DNA comprises a sequence selected from the group consisting of SEQ ID No. 1, 3, 5, 39, 41, 43 and 45.

6. The DNA sequence of claim 1, wherein said DNA is contained in a single locus of *Ehrlichia canis*.

7. The DNA sequence of claim 6, wherein said locus is a multigene locus of 10,677 base pairs in length.

8. The DNA sequence of claim 7, wherein said locus contains genes encoding homologous 28-kilodalton proteins of *Ehrlichia canis*.

9. The DNA sequence of claim 8, wherein said homologous 28-kilodalton proteins of *Ehrlichia canis* are selected

from the group consisting of p28-1, p28-2, p28-3, p28-4, p28-5, p28-6, p28-7, p28-8 and p28-9.

10. A vector comprising the DNA sequence of claim 1.

11. The vector of claim 10, wherein said vector is an expression vector capable of expressing a peptide or polypeptide encoded by a sequence selected from the group consisting of SEQ ID No. 1, 3, 5, 39, 41, 43 and 45 when said expression vector is introduced into a cell.

12. A recombinant protein comprises of an amino acid sequence selected from the group consisting of SEQ ID No. 2, 4, 6, 40, 42, 44 and 46.

13. The recombinant protein of claim 12, wherein said amino acid sequence is encoded by a nucleic acid segment

comprising a sequence selected from the group consisting of SEQ ID No. 1, 3, 5, 39, 41, 43 and 45.

14. A host cell comprising a nucleic acid segment selected from the group consisting of SEQ ID No. 1, 3, 5, 39, 41, 43 and 45.

15. A method of producing the recombinant protein of claim 12, comprising the steps of:

obtaining a vector that comprises an expression region comprising a sequence encoding the amino acid sequence selected from the group consisting of SEQ ID No. 2, 4, 6, 40, 42, 44 and 46 operatively linked to a promoter;

transfecting said vector into a cell; and

culturing said cell under conditions effective for expression of said expression region.

16. An antibody immunoreactive with a polypeptide comprises of an amino acid sequence selected from the group consisting of SEQ ID No. 2, 4, 6, 40, 42, 44 and 46.

17. A method of inhibiting *Ehrlichia canis* infection in a subject comprising the steps of:

identifying a subject prior to exposure or suspected of being exposed to or infected with *Ehrlichia canis*; and

administering a composition comprising a 28-kDa antigen of *Ehrlichia canis* in an amount effective to inhibit *Ehrlichia canis* infection.

18. The method of claim 17, wherein said 28-kDa antigen is a recombinant protein comprising an amino acid sequence selected from the group consisting of SEQ ID No. 2, 4, 6, 40, 42, 44 and 46.

19. The method of claim 18, wherein said recombinant protein is encoded by a gene comprising a sequence selected from the group consisting of SEQ ID No. 1, 3, 5, 39, 41, 43 and 45.

20. The method of claim 17, wherein said composition comprising a 28-kDa antigen is dispersed in a pharmaceutically acceptable carrier.